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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,980	05/02/2001	Michael Brown	HO-P02427US0	5779

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EXAMINER

FLEMING, FRITZ M

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/847,980

Applicant(s)

BROWN, MICHAEL

Examiner

Fritz M Fleming

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers


- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


FRITZ FLEMING
PRIMARY EXAMINER
GROUP 2100

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/2/2002
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what is meant by the "diffserv" bits. For purposes of the art rejections below, it is assumed that applicant is referring to the type of data checked by Kawafuji below.

Specification

3. The disclosure is objected to because of the following informalities: It appears as though some of the references to FIGURE1 should be specified as 1a or 1b as there is no single Figure 1. Furthermore, it is to be noted that some of the reference numerals (i.e. route comparator 182) do not match those of the Figures. A review of the reference numerals is respectfully requested to ensure proper concordance between the drawings and specification.

Appropriate correction is required.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12,15,16,19-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawafuji et al. (Kawafuji).

In Kawafuji, note that, per Figures 1,2,3,5 and prior art 7,8a,8b there exists preferred routing information in the routing table 11 and ARP table 12, that operate per Figures 8a,8b of the prior art (col. 6, lines 42-48), such that a default routing is performed via the first routing means section 22, per the described prior art embodiment, for the router 20. The first routing section also creates the optimum routing table 23, such that 23 is used to perform routing in the second routing section means 30 to perform increased speed routing by not having to execute the complicated processing of the first section 22. Per column 7, lines 1-5, the memory table 23 has, in advance, some optimal routes obtained from the conventional routing scheme (i.e. the preferred routing table info in tables 11 and 12) loaded therein. Per the flowchart of Figure 5, the addition to table 23 of more preferred routing information is performed by initially determining predetermined conditions in S12,13 (to include a registration in 23), meaning that preferred information be contained in tables 11 and 12, but not yet in 23. If the entry is not in 23, then the first

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packet is routed along the default path to include 22, with updates made to 11,12, and 23 (as needed per S18,19 and column 8, lines 20-64), so that the second packet addressed to the same destination is sent along the preferred route of the second routing section means 30 on a high speed routing manner over the preferred path of the second router means section 30. Thus 25 serves as the claimed IP flow monitor for the router 20, such being coupled to and into the monitor. Accordingly, the address, application type, type of service, protocol type, port number, and source IP address are monitored, per columns 1-10 in the conventional routing, as well as the improved routing. Thus the identification is looked up in 23 and 11,12 per 26-29. Thus the update of 23 is a route injection. End systems send and receive per Figure 1. Thus the router itself is updated per the process. While not called a cache, table 23 serves as a cache, along with 29, as a positive determination by 29 precludes further determination of an updated preferred path by directly routing the packet via the preferred means 30. Thus the IP route comparator 26-28 informs 29 so that the route no longer need be considered by 11,12,23. Subnets form a preferred path per Figures 1 and 8a,8b. Thus the method, as indicated above, has been anticipated. For apparatus claims, note the above analysis to anticipate an apparatus to monitor at 26-28, an apparatus to determine at 29, and an apparatus to send updated routing tables to 11,12 and 23, as needed, by 22. Similarly, the IP monitor is anticipated by the apparatus to monitor a first packet at 26-28, such being sent by a router to include the router 20 doing the sending (if it is being sent per Figures 1-6), as the first packet is sent by a default route in 22 and second+ packets are sent by the preferred route of 30. AN apparatus to

receive the updated routing tables is seen as 23,11 and 12, as needed, as updated by 22, and ultimately received by the preferred second routing means 30. Similarly, a router is shown at 20, with an apparatus to receive at 21 and 26-28, an apparatus to determine per 29, and an apparatus to direct the sending of updated router table information to the second router 30 via the table 23 under the direction of the first router means 11,12 and 22. Thus the table 23 serves as a cache, in conjunction with registration determining means 29, so as to prevent routing via first router 22 once the first packet has been routed by 22, followed by updating of 11,12, and 23 so as to have second and subsequent packets routed by the second router means 30.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawafuji in view of the admitted prior art.

Kawafuji does not explicitly mention the use of BGP updating and routing. However, the admitted prior art per the background clearly places the use of BGP routing and updating as being conventional in the art. Therefore it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify Kawafuji per the admitted prior art so as to be able to benefit from the convention modes of routing and updating.

5. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawafuji in view of Kloth et al. (Kloth).

Kawafuji lacks the remote IP route comparator and remote database. In the same field of endeavor, Kloth shows the use of a router 250, a remote intermediate switch station 300, which contains, per Figure 3, the shortcut engine 304, a forwarding engine 302, a forwarding table 600, and a shortcut table 700, with learning per the first candidate packet. Thus Kloth shows a remote route comparator 302,304,308 and a remote database 600,700 for the router 250. Therefore it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify Kawafuji per the teachings of Kloth in order to be able to provide shortcut route and database comparisons remote the router, so as to be able to perform subsequent forwarding via the hardware of the switch, as opposed to the router, consistent with the teachings of Kawafuji that set forth the use of the respective circuits of 25,29,30 for high speed logic circuit packet processing (col. 8, lines 6-17). Thus the combined teachings show it is obvious subject matter to move the circuits of Kawafuji remote of the router to the switch performing the same operations per Kloth.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Han teaches the use of an ATM router to set up preferred routes from the default routes. Callon teaches routing tables 308 and databases 310. Bodnar et al. teach router slices. Partridge et al. teach a data packet router and Civanlar et al.

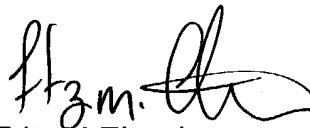
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teach a router 100 with databases 104, as well as cache at 203 and 240. Brown is the published application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz M Fleming whose telephone number is 703-308-1483. The examiner can normally be reached on M-F, 0600-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Fritz M Fleming
Primary Examiner
Art Unit 2182

fmf